

THAT WHICH IS CLAIMED:

1. A method for dynamic control of data transfer by a subscriber during an on-going network session, comprising:

- 5 receiving a data packet at a gateway device;
retrieving a subscriber selected bandwidth for a subscriber associated with the data packet;
determining if the transfer rate for data packet transmission should be limited based on the subscriber selected bandwidth; and
10 limiting a transfer rate for data packet transmission based on the outcome of the determination process.

2. The method of Claim 1, wherein receiving a data packet further comprises receiving a data packet from a subscriber.

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3. The method of Claim 2, further comprising identifying the subscriber by the media access control (MAC) address within the data packet.

4. The method of Claim 1, wherein receiving a data packet further comprises
20 receiving a data packet from a network.

5. The method of Claim 4, further comprising identifying an intended subscriber recipient by the media access control (MAC) address within the data packet.

25 6. The method of Claim 1, wherein retrieving a subscriber selected bandwidth further comprises retrieving a subscriber selected bandwidth from an Authentication, Authorization and Accounting (AAA) subscriber management interface.

7. The method of Claim 1, wherein retrieving a subscriber selected
30 bandwidth further comprises retrieving a subscriber selected bandwidth for information

being sent to a network and an independent subscriber selected bandwidth for information being retrieved from a network.

8. The method of Claim 1, wherein determining if the transfer rate for data packet transmission should be limited further comprises determining a delay period, if any, for transmitting the packet and wherein limiting a transfer rate for data packet transmission further comprises queuing the data packet for the delay period before transmitting the packet.

9. The method of Claim 8, wherein determining a delay period further comprises determining a delay period based upon the byte size of the data packet.

10. The method of Claim 8, wherein determining a delay period further comprises determining a delay period based upon the byte size and the time lapse of the most recently transmitted data packet that was associated with the subscriber.

11. The method of Claim 8, wherein queuing the data packet for the delay period further comprises queuing the data packet for a maximum delay period of 2 seconds.

12. The method of Claim 8, wherein queuing the data packet for the delay period further comprises queuing the data packet using a ring buffer.

13. The method of Claim 8, wherein the subscriber network session is a wireless network session.

14. A method for dynamic control of data transfer during an on-going network session, comprising:

receiving a data packet;
retrieving a subscriber priority scheme associated with the data packet;
determining a priority, if any, for transmitting the packet; and

queuing the data packet for delayed transmission.

15. The method of Claim 14, further comprising monitoring a rate of data transmission across a network link to determine if the network link is capable of further data transmission.

16. The method of Claim 14, wherein queuing the data packet for delayed transmission further comprises queuing the data packet to limit the rate of packet transmission to the network link in response to the monitoring.

17. The method of Claim 14, wherein the subscriber priority scheme is based upon the content of the information in the data packet.

18. The method of Claim 14, wherein the subscriber priority scheme is based upon a subscriber selected class of service.

19. The method of Claim 14, wherein the subscriber priority scheme is based upon a subscriber selected reservation of a bandwidth block.

20. The method of Claim 14, wherein the network session is a wireless network session.

21. A gateway device for implementing dynamic subscriber bandwidth management, comprising:

a bandwidth management module that determines if a received data packet will be delayed from further transmission in order to limit the bandwidth of the subscriber to which the data packet is associated; and

a queue for queuing the data packet for a delay period if the bandwidth management module determines that a delay period is necessary.

22. The gateway device of Claim 21, wherein the bandwidth management module determines the delay period for data packets that will be queued.

23. The gateway device of Claim 21, wherein the bandwidth management
5 module further comprises a subscriber selectable bandwidth module that limits an upstream and downstream bandwidth to that which a subscriber selected.

24. The gateway device of Claim 23, wherein the subscriber selectable
bandwidth module identifies a predetermined subscriber bandwidth by communicating
10 with an AAA service.

25. The gateway device of Claim 21, wherein the bandwidth management
module further comprises a traffic shaping module that utilizes the queue for queuing
data packets to provide priority bandwidth service to the subscriber.
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26. The gateway device of Claim 21, wherein the traffic shaping module
further utilizes the queue for queuing data packets in response to the monitoring of rates
of transmission at network links.

27. The gateway device of Claim 21, wherein the gateway device is in
20 wireless communication with one or more hosts that send and receive the data packets.